

# Gigantic Hydatid Cyst Of The Brain

SEREBRAL DEV KİST HİDATİK

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### SUMMARY

Human hydatid disease is endemic in Turkey and brain hydatosis is a childhood disease. The hydatid cysts of the brain are mostly single and 18% of the cases have another visceral involvement. The cysts may rarely reach to gigantic sizes in children. Here, we report a case of gigantic hydatid cyst of the brain in a seven years old boy who presented with signs of increased intracranial pressure. He was successfully operated with Dowling's surgical technique and he is still being followed up with no neurologic sequel.

**Key words:** Hydatid disease, giant cyst, brain, child

### ÖZET

İnsan hidatik hastalığı Türkiye'de endemik olup, beyin hidatozisi çocukluk çağıının hastalığıdır. Beyin hidatik kistleri sıklıkla tek olup vakaların %18'inde diğer visceral organlarda tutulum mevcuttur. Kistler çocukluk çağıında nadiren çok büyük boyutlara ulaşmaktadır. Bu yazıda artmış kafa içi basıncı bulguları ile başvuran ve beyinde devasal boyutlarda hidatik kisti saptanan yedi yaşında erkek bir olgu sunulmaktadır. Hasta başarıyla Dowling's cerrahi tekniği ile opere edilmiş olup halen sekelsiz olarak takip edilmektedir.

**Anahtar sözcükler:** Hidatik hastalığı, dev kist, beyin, çocuk

### Uluç Yiş

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The hydatid cyst is the larval form of *Echinococcus granulosus* and humans are the intermediary hosts in the parasite cycle. The human hydatid disease caused by *Echinococcus granulosus* strain is endemic in Turkey (1). The most commonly affected organs are the liver and the lungs. Cerebral hydatid disease is rare and brain involvement occurs in 1-2% of all *Echinococcus granulosus* infections (2). Cerebral hydatid cysts are generally supratentorial, single and unilocular. Cerebral hydatid cysts are more commonly found in children than in adults and in

children, the cerebral hydatid cysts tend to become larger (3).

### CASE REPORT

A seven-years old boy male patient was admitted to our hospital with complaints of headache, myalgia and abdominal pain. The child suffered from headaches for two months. The severity of headaches worsened in the last month before admission and he began vomiting.

Physical examination was normal. Neurologic examination showed increased deep tendon reflexes and papilledema.

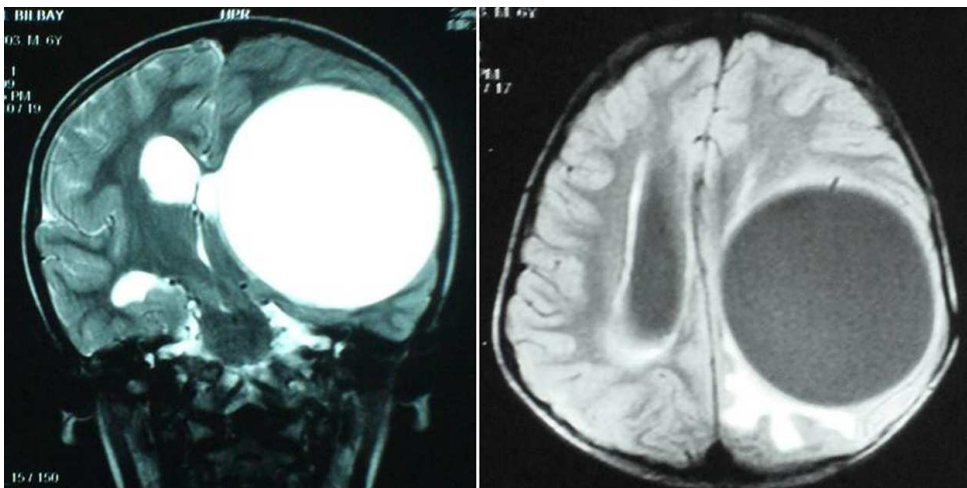
Routine blood analysis and chest radiograph were normal, but abdominal ultrasonography showed multiple cysts in the liver. Magnetic resonance imaging showed a left temporoparietoccipital located sharply delineated spherical mass approximately 8 cm in diameter (Figure). There was a significant peripheral edema around the cyst. The cyst also caused midline shift and pressure on brainstem structures (Figure). The patient underwent temporoparieto-occipital craniotomy and the cyst was removed via Dowling's technique. The histopathologic findings were consistent with a hydatid cyst. The patient recovered completely after the surgical procedure. Treatment with mebendazole at a dose of 50 mg/kg/day for 30 days followed by a washout of 15 days was started after the histopathological diagnosis.

## DISCUSSION

Cerebral hydatid cysts are more common in children than in adults and these cysts sometimes grow to an enormous size because of the elastic structure of the cranial bones. Majority of cysts remain in the liver and lungs

and only 1-2% of the cysts reach the brain. The size of the cysts reported in children ranges from 4 cm to 13.5 cm and the average volume is 200 cc, but can reach to 500 cc (3). The cerebral hydatid cyst of our case was one of the biggest reported cysts and the volume was 350 cc. Most of the cerebral cysts are isolated but about 18% of the cases have an associated visceral localization. Our case also had multiple cysts in the liver besides brain involvement.

The clinical presentation of the disease is related to the site of cyst in the brain. The most common clinical findings include headache, nausea, vomiting, motor weakness, seizure and cranial nerve involvement (4). Our case had symptoms of increased intracranial pressure including headache, vomiting and papilledema. Magnetic resonance imaging of the brain is superior to computed tomography, because it can detect the anatomic relationship of the cystic lesion to the adjacent structures. Histopathologic diagnosis is very important because they can be confused with other cystic parasites, arachnoid cysts, periventricular ependymal cysts, tumours and abscess (5). The histopathologic analysis of the patient was compatible with hydatid cyst.



**Figure.** Coronal and axial sections of the brain magnetic resonance imaging revealed an eight centimetres cyst in the left temporoparietoccipital region which caused midline shift and pressure on brainstem structures

The treatment of cerebral hydatid cyst is operative with total cyst extirpation. Among the different techniques for

cyst removal, Dowling's technique is the preferred one for total hydatid cyst extirpation. In addition to the surgical

procedure, medical treatment including albendazole or mebendazole should be started to reduce the risk of post-operative recurrence (6).

In conclusion, hydatid cysts can reach to gigantic sizes in children because of elastic structure of cranial bones. When a cystic lesion is detected in children who have signs of increased intracranial pressure, hydatid disease should be considered in the differential diagnosis in countries where the infection is endemic.

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